

Serial No. 10/089,891
Amendment Dated: April 6, 2004
Reply to Office Action October 6, 2003

Attorney Docket No. 2101/50761

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A method of locating an assembly point [(P)] on a first part [(40)], at which assembly point the first part is to be joined to a second part [(1)], the method comprising the steps of:

measuring and determining an assembly location (~~1a, 1b, 1c, 1d~~) in
with respect [of] to the second part;

measuring a portion (~~42a, 42b, 42c~~) of a surface [(43)] of the first part, the surface being spaced away from the second part, so as to define the position and orientation of the surface; [and]]

calculating as the assembly point on the surface of the first part ,
where a point at which the surface of the first part is intersected perpendicularly by a vector [(N)] passing between through the determined assembly location;
and ~~the surface of the first part.~~

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indicating the calculated assembly point on the surface of the first part.

Claim 2. (Currently Amended) A method of locating an assembly point [(P)] on a first part [(40)], through which the first part is to be joined to a second part [(1)], the method comprising the steps of:

determining an assembly location (~~1a, 1b, 1c, 1d~~) in respect of the second part;

offering up the first part for assembly with the second part, the first part overlying the determined assembly location;

~~the method being characterised by the steps of:~~

measuring a portion (~~42a, 42b, 42e~~) of a surface [(43)] of the first part spaced away from the second part so as to define [[the]] position and orientation of the surface;

calculating the assembly point on the surface of the first part ;
where a point at which the surface of the first part is intersected perpendicularly

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by a vector [[(N)]] passing between through the determined assembly location
~~and the surface of the first part;~~ and

indicating [[the]] calculated the assembly point on the surface of the
first part.

Claim 3. (Original) A method according to claim 1, further comprising the step of determining a reference position fixed relative to the second part.

Claim 4. (Original) A method according to claim 3, wherein the steps of determining the assembly location and measuring and determining the reference position are performed by a measuring device located in a first position, and the steps of measuring and determining the reference position and step of measuring a portion of a surface of the first part is performed by the or another measuring device in a second position.

Claim 5. (Original) A method according to claim 4, wherein the steps of measuring from the first and second positions are performed subsequent to the further step of offering up the first part for assembly with the second part, the first part overlying the determined assembly location.

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Claim 6. (Previously Presented) A method according to claim 1, wherein at least one measuring step or the step of indicating is performed by a measuring device of known position.

Claim 7. (Original) A method according to claim 6, wherein the step of determining an assembly location further comprises the step of measuring the vector and the distance to a datum position associated with the second part from a measuring device of known position and determining the position of the assembly location relative to the measured datum position using stored CAD data.

Claim 8. (Previously Presented) A method according to claim 1, further comprising the step of verifying that the position and orientation of the surface of the first part relates in a predetermined manner to the position and orientation of the surface of the second part local to the determined assembly location.

Claim 9. (Previously Presented) A method according to claim 1, wherein the step of determining the assembly location is carried out using a retro-reflector supported relative to a guide hole located in the second part.

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Claim 10. (Previously Presented) A method according to claim 1, wherein at least one measuring step or the step of indicating is carried out using a non-contact technique.

Claim 11. (Original) A method according to claim 10, wherein at least one measuring step or the step of indicating is carried out using a laser tracker device.

Claim 12. (Previously Presented) A computer program comprising program code means for performing the method steps of measuring, calculating and indicating as defined in claim 1 when the program is run on a computer and/or other processing means associated with suitable measuring and indicating means.

Claim 13. (Previously Presented) A computer program product comprising program code means stored on a computer readable medium for performing the method steps of measuring, calculating and indicating as defined in claim 1 when the program is run on a computer and/or other processing means associated with suitable measuring and indicating means.